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Aviation Insurance Claims in Leasing Contracts Arising from the Russia-Ukraine Conflict: an Update from English Courts by Carla Bonacci



Aviation Insurance Claims in Leasing Contracts Arising from the Russia-Ukraine Conflict: an Update from English Courts

by Carla Bonacci*

Abstract

As the Russian-Ukrainian conflict continues, in recent months English Courts have been focused on claims related to insurance policies taken out under aircraft leasing contracts and the subsequent deployment of a secondary market for the sales and purchasing of claims. This article examines how Commercial Courts in the United Kingdom, noting the exponential increase in claims, are exploring collective management measures that can be remedial to pending and potential cases.

1. Introduction

Following Russia's actions in Ukraine in February 2022, the United States, the United Kingdom and the European Union issued a wide range of sanctions against Russia. These measures have included, among others, the closure of US, UK and EU airspaces to Russian aircraft and a ban on UK and EU operators from entering into aviation leasing contracts with Russian air carriers and companies ^{(1).}

In response to these sanctions, on the 11th of March 2022, the Russian Government issued Decree No. 81 of 2022 by which:

- the export and exit of aircraft in that moment operating in Russia has been prohibited;
- airworthiness certificates and related documents issued by foreign aviation authorities for aircraft operating in Russia, including operating licences expiring in 2022, have been recognised as valid;
- Russian domestic airlines have been allowed to re-register aircraft in the Russian aviation registry without
 prior cancellation of the aircraft from the aviation registry of the State of original registration. These provisions
 violate the obligations placed on contracting States, including Russia, by the 1944 Chicago Convention, which
 Article 18 prohibits the registration of an aircraft in more than one State.

According to industry estimates, as of July 2023 there were approximately 400 foreign-owned aircraft blocked in Russia, that were leased (mostly through dry lease agreements) to Russian carriers and companies, with a value of over 10 billion dollars.

These circumstances raised the issue of the recovery of dry-leased aircraft from Western owners that were stranded in Russia, due to obstacles imposed by the Federation and Western sanctions.

From the perspective of the insurance market, as the conflict continued in 2022 in 2023, the main concerns focused on:

- the growing claims relating to aviation insurance policies taken out under leasing contracts and raised mostly in the UK, US and Irish Courts;
- the development of a consequent secondary market for the sale and purchase of claims.

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¹ The relevant European sanctions were introduced by Articles 3c § 2, 3 and 4 of Council Regulation (EU) 2022/328 of 25 February 2022 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine. UK sanctions are Sanctions 27 and 29, introduced by the British Government through Regulation 2019 No. 855.



2. Pending Cases

Lessors have not been paid yet and are suing insurers across several jurisdictions. More than 40 aviation leasing firms locked battles with insurers over who should bear up to pay 10 billion dollars – the costs for the 400 jets blocked in Russia – and urged High Courts to allow reinsurance disputes to be heard in London⁽²⁾.

Since the beginning of the disputes, most of the cases pending in English Courts relate to claims arising under the following types of insurance policies ⁽³⁾:

- the primary insurance policies of the lessors (aircraft owners), which benefit from the claims settlements of the Russian lessees and from any reinsurance of such policies;
- the contingent and/or possessed insurance policies of the lessees (operating the aircraft), which usually
 undersign such insurance policies i) when a lessor has failed to adequately insure the aircraft or when the
 lessor's primary insurance policy do not cover certain types of claims (contingent policies) or ii) when the
 aircraft is back in the possession of the lessor or in the process of being repossessed (possessed policies) ⁽⁴⁾.

2.1. Lessors' primary policies

The first level of insurance coverage for any aircraft is the primary insurance policy of the aircraft owners (in the case at hand, the Western lessors). This insurance policy generally consists in:

- Hull All Risks, which covers the loss of or damage to an aircraft in flight or on the ground, up to a specified maximum amount agreed at the time of signing. Under clause AVN 48B (War, Hijacking and Other Risks Exclusion Clause), typically included in the Hull All Risks, risks caused by specific events such as war, invasion, international tension, confiscation, nationalisation, seizure or appropriation by or under the order of any government fall outside the coverage;
- Hull War and Allied Perils Risks, which cover risks typically excluded from Hull All Risks policies, pursuant to
 clause AVN 48B, with the exception of claims arising from the hostile detonation of a weapon of war employing
 atomic fission and/or fusion, nuclear or radioactive substances ⁽⁵⁾;
- Aircraft Third-Party Liability policies, covering general third-party liability, including indemnity obligations that may arise under leasing contracts.

2.2. Lessees' contingent and/or possessed policies

As anticipated, most lessees sign contingent and/or possessed policies, ensuring the aircraft owned by the lessor by providing Hull All Risks and Hull War Risks cover, with terms and clauses similar to those of the primary lessor's insurance policy.

² See https://www.reuters.com/business/aerospace-defense/aircraft-lessors-set-june-2024-trial-over-russia-insurance-claims-2023-07-31/#:~:text=Lessors%20are%20suing%20dozens%20of,the%20termination%20of%20their%20leases.

³ Please note that in the context of aircraft operating leasing the lessor is the owner of the aircraft which retains ownership and is responsible for major maintenance and repairs. The lessee is the subject retaining and operating the aircraft, who at the end of the lease term, shall return the aircraft to the lessor or may exercise the option to extend the lease term or to purchase the aircraft. See https://flyalliance.com/wet-lease-vs-dry-lease/#:~:text=The%20lessor%20retains%20ownership%20and,lease%20or%20purchase%20the%20aircraft.

⁴ See https://www.whitecase.com/insight-alert/aviation-insurance-and-other-claims-arising-out-russian-sanctions.

⁵ The Defendants in the UK trials are generally split between Section One and Section Three insurers, although a number of insurers subscribe to both.



3. Controversial aspects of the primary lessors' policies

In the current scenario, it is necessary to consider that:

- on the one hand, Russia requires its lessees/carriers to sign all insurance cover with Russian domestic insurers;
- on the other hand, Western lessors and financing parties contractually require Russian lessees/carriers to reinsure their insurance policies (whether Hull All Risks, Hull War Risks or third liability coverage) in the London market and/or in other international insurance markets.

As a consequence, as noted by English Courts in relation to the Ukrainian crisis, most of the claims raised by the Western lessors present some problematic aspects related to ^{(6):}

- the policy documentation: lessors may have received only insurance and reinsurance certificates from lessees
 and not the full policy wordings. The key terms of the policy are therefore unclear in the context of litigation,
 raising doubts about applicable law, dispute resolution provisions, applicability of cut-through clauses, exclusion
 of certain risks, etc.;
- the identification of reinsurers: although the insurance of Russian lessees is to be reinsured on the international market, the applicability of cut through clauses or AVN 67B – a standard clause including the lessor as an additional insured – is difficult to assess in the absence of complete wording of the policy itself.

4. Controversial aspects of the contingent and/or possessed lessees' policies

Claims arising under lessees' contingent and/or possessed policies involve a careful examination of the insurance policy provisions. In these cases, the main areas of dispute found by English Courts relate to the following aspects ^{(7):}

- whether and when the loss of the aircraft has occurred, what the insured shall prove in order to attest the loss: in particular, whether it is required to demonstrate (i) irreparable deprivation of the possession of the aircraft or (ii) wrongful deprivation of the possession of the aircraft in circumstances where recovery is uncertain. This, with margins of doubt as to (i) whether the aircraft can still be returned and (ii) the willingness of the Russian lessees to return them (and, in any event, in what manner). In this regard, it should be noted that insurers generally deny the coverage if the aircraft have not been lost or damaged and if they have always remained in the possession of the value of the aircraft and not in case of deprivation of the possession. Moreover, insurers argue that the proximate cause of the loss is the lessee's decision not to return the aircraft and ii) whether the aircraft may still be recovered;
- what caused the loss: when the insured party bases its claims on a standard war risks clause, such as LSW 555D, it is necessary to prove that the loss was caused by one of the insured risks, e.g. confiscation or seizure by or at the behest of a government. This results in uncertainty as to the actual causes of the loss of the aircraft (e.g. the actions of the Russian government or the subsequent behaviour of the lessees);

⁶ Si v. Russia Sanctions: Guidance, link: https://www.gov.uk/government/publications/russia-sanctions-guidance/russia-sanctions-guidance/

⁷ Si v. Insurance and Reinsurance, Related Provision: Article 3c; Article 3m; Article 3n of Council Regulation 833/2014, Frequently Asked Questions – As of June 2022, link: https://ec.europa.eu/info/sites/default/files/business_economy_euro/ banking_and_finance/documents/faqs-sanctionsrussia-insurance_en.pdf.

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- the relationship between the primary insurance policies and the contingent and/or possessed policies: the latter
 can only be activated if the primary insurance policies do not respond to the claim, depending on their precise
 wording. This leaves room for extensive debate in Court, since access to documentation and the consequent
 possibility of enforcing the contingent and/or possessed policies are slowed down and hindered by current
 conditions;
- the enforceability of AVN 111(R) clauses: the standard AVN 111 clause states that insurers are not obliged to indemnify if "by virtue of a law or regulation [...] applicable to an insurer [...] the provision of cover to the insured is or would be illegal because it violates an embargo or sanction" ⁽⁸⁾. If the AVN 111(R) clause is included in the contingent and/or possessed policy, the insured may not benefit from it and the relevant cover could be considered unlawful under EU sanctions. This since the entry into force of Regulation (EU) 2022/328 on 26 February 2022, the provision of services by EU insurers has ceased (Art. 3c § 2).

5. Latest updates

In the past few months, the UK Commercial Court, noting an exponential increase in claims, explored collective management measures that can resolve pending and potential cases.

In particular, the Court has ordered to join 5 similar sets of proceedings in which claims are being brought against multiple insurers for the alleged *loss* of aircraft that have not been returned to lessors following the imposition of sanctions against Russia.

The combined trial is set to begin in 2024 and will provide some answers for the open questions emerging in relation to the insurance policies. Moreover, considering the similarity of the cases, a decision in the combined trial may accelerate discussions between insurers and insured and facilitate the settlements of other claims.

The first of such settlements has been reached at the beginning of September 2023. Aercap, an Ireland-based aircraft lessor, has reached a landmark agreement to settle an insurance claim over 17 jets and 5 spare engines leased to the airline Aeroflot and its subsidiary Rossiya. Aercap has reportedly received \$645 million from the insurance company NSK, while NSK has received property of the engines and aircrafts. This agreement has been welcomed as a positive development by some European insurers⁽⁹⁾.

6. Conclusions

In light of the above, the trials set to be discussed in the Commercial Court of the United Kingdom in 2024 will be crucial in providing answers to all the controversial points that have been discussed. The claims and the supporting arguments will finally be presented in full and the judgment will provide answers on the merits of the disputes. These developments, as well as the reaching of settlement between a foreign-owned aircraft and Russian companies, will hopefully help all the parties involved in the resolution of disputes. However, the future evolution of the matters depends also on the volatile geopolitical climate, whose developments will have to be monitored closely.

⁸ See https://www.whitecase.com/insight-alert/aviation-insurance-and-other-claims-arising-out-russian-sanctions.

⁹ See https://www.reuters.com/business/aerospace-defense/aircraft-lessor-aercap-settles-russia-aeroflot-claim-645-million-2023-09-06/.



Space

The Powerful Hyperspectral Technology of the Prisma Satellite *by Luisa Santoro and Piercarlo Ghossoub*



The Powerful Hyperspectral Technology of the Prisma Satellite

by Luisa Santoro* and Piercarlo Ghossoub**

Abstract

Launched on 22 March 2019, PRISMA (PRecursore IperSpettrale della Missione Applicativa) is a high-tech mediumresolution hyperspectral satellite fully funded by the Italian Space Agency (ASI) that – first European Earth Observation system in Europe – performs chemical and physical analyses from space, thanks to its state-of-the-art hyperspectral optical instrumentation capable of distinguishing not only the geometric characteristics of the objects observed but also their chemical-physical composition. This article illustrates how the PRISMA technology can effectively be used to conduct land surface, agriculture and forestry studies, as well as water resources, vegetation, coastal and soil research, in order to protect biodiversity, optimise agriculture and resource management, prevent and/or evaluate natural disasters, etc. An example of the potential effective use of PRISMA data in international cooperation concludes the article.

1. Introduction

PRISMA (PRecursore IperSpettrale della Missione Applicativa - Hyperspectral Precursor of the Application Mission) is a high-tech medium-resolution hyperspectral satellite fully funded by the Italian Space Agency (ASI). Launched⁽¹⁾ on 22 March 2019 with a VEGA rocket, it was developed by a Temporary Joint Venture of enterprises led by OHB Italia - that is responsible for the mission and management of the three main segments (ground, flight and launch) – and Leonardo – that developed the electro-optical hyperspectral instrumentation and the on-board equipment (attitude sensors, solar panels and power-supply unit); Telespazio (Leonardo 67%, Thales 33%) set up the mission control centre at Fucino Space Centre, with data acquisition and processing performed at the ASI Matera Space Centre.



Figure 1: The PRISMA satellite in a hangar at the Guiana Space Centre in Kourou - Credits: ASI

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The opinions expressed in this article are purely the views of the author, and thus may not in any circumstances be regarded as an official position of the institution the authors belongs to.

¹ PRISMA was placed on a sun-synchronous orbit at an average altitude of about 615 km, an inclination of almost 98° (retrograde polar orbit) and a period of 96 minutes. The sun-synchronous orbit is, in fact, a particular type of geocentric orbit which guarantees that the satellite will observe a specific point on the Earth's surface always at the same local solar time. In other words, this technique allows the satellite to observe a certain area of our planet in approximately the same lighting conditions, so as to be able to collect homogeneous data from time to time. See https://www.lescienze.it/news/2019/03/18/news/prisma_geo-osservazione_asi_iperspettrale-4329505/.



PRISMA, indeed, is "the first European Earth Observation system with innovative hyperspectral optical instrumentation able to perform chemical and physical analysis from Space"⁽²⁾; i.e., it is a 800-kg high-tech Earth observation system, equipped with electro-optical instruments, which integrates a hyperspectral sensor with a medium-resolution camera sensitive to all colours ("panchromatic"), so that it is able to distinguish not only the geometric characteristics of the objects observed, but also their chemical-physical composition.

This means that, since each material has its own spectral *"signature"* – a fingerprint or unique combination of colours, called *"spectral bands"* – from an orbit at a height of 615 km PRISMA's electro-optical instrumentation is able to analyse it, identifying objects or tracing the characteristics of the area under observation, also carrying out high-precision monitoring activities. In particular, such instrumentation consists of an imaging spectrometer (or hyperspectral imager) capable of acquiring VNIR (Visible and Near-InfraRed) and SWIR (Short-Wave InfraRed) products (with 237 channels across both bands), with a spatial resolution of 30 meters; and of a panchromatic camera with a spatial resolution of 5 meters ⁽³⁾: *"Hyperspectral imaging is a novelty of remote sensing technology that acquires image data in hundreds of narrow continuous bands from the visible to the shortwave infrared"* said ASI PRISMA Program Manager - now Head of the Earth Observation Division - Francesco Longo, adding that *"Each individual pixel of the hyperspectral image contains a continuous spectrum of the solar radiation reflected by the surface. These spectra include absorption features which can be interpreted as spectral fingerprints of Earth's elements. That allows the identification of mineral types and soils [...] vegetation types and conditions, and to detect pollutants in water and air" ⁽⁴⁾.*

2. Monitoring geological phenomena, the state of natural resources, air quality and pollution levels with PRISMA

The scientific objectives ⁽⁵⁾ of the 5-year PRISMA mission range from the implementation of the Earth observation preoperative mission itself and the in-orbit demonstration and qualification of an Italian state-of-the-art hyperspectral/ panchromatic technology, to the validation of end-to-end data processing for the development of new applications of spectral resolution images, capitalizing on the ASI expertise in those domains (HypSEO mission and Italy-Canada Joint Hyperspectral Mission).

Applications of the PRISMA satellite include land surface, agriculture and forestry studies, regional geology and land use studies; hazard monitoring (fires, landslides, volcanic and seismic risks) & risk-management support; carbon cycle monitoring, atmospheric turbidity (optical and spectral characterisation); water resources and vegetation research; security; coastal, soil and air studies⁽⁶⁾.

Thanks to the active collaboration between the National Research Council of Italy and the Italian Space Agency, the entire catalogue of PRISMA acquisitions is now available on the GEOSS multi-mission portal. The data contained in the catalogue is updated on a daily basis in order to ensure consistency between the PRISMA acquisitions listed in the ground segment of the mission and the GEOSS portal. The inclusion of PRISMA in the missions managed by the GEOSS portal will make PRISMA coverage data available to the GEOSS user community and will therefore allow multi-mission space-temporal interrogations between PRISMA and the other data indexed in the portal ⁽⁷⁾.

² https://www.telespazio.com/en/news-and-stories-detail/-/detail/180619-prisma-presentate-le-immagini-acquisite-a-matera-dal-satellite-iperspettrale-dell-asi.

³ https://www.asi.it/en/earth-science/prisma/.

⁴ https://www.forum.kosmonauta.net/index.php?topic=3368.135.

⁵ https://web.archive.org/web/20131004223031/http://www.asi.it/files/The%20PRISMA%20mission.pdf.

⁶ https://database.eohandbook.com/database/missionsummary.aspx?missionID=396.

⁷ https://www.asi.it/2023/08/il-catalogo-delle-acquisizioni-prisma-e-ora-disponibile-liberamente-sul-portale-geoss/



Here follows a couple of the first PRISMA images that were received by the ASI Matera Space Centre, where experts from ASI, Leonardo, Planetek, Telespazio/e-GEOS and OHB Italia processed them, supported by scientists from the National Research Council of Italy (IREA/CNR) and the University of Milano-Bicocca:



Figure 2: Castel Fusano, Italy - Credits: ASI & Telespazio

This image is an example of how the PRISMA technology can be effectively used to protect biodiversity and preserve it against hydro-geological risks due to fires: PRISMA performed an analysis on Castel Fusano (an urban park in Rome, Italy), in particular regarding its vegetation status and chlorophyll index.

By measuring chlorophyll content in agricultural applications, producers are able to acquire valuable insights about plant growth and yield potential, thus effectively and efficiently adopting targeted fertilisation strategies. The benefits of such approach may also include improved yield, reduced use of fertilisers, etc.

Figure 3: Peru area Credits: ASI & Telespazio



In this image, PRISMA detected vegetation water content in an area located in Peru, identifying well and not well irrigated fields, with unprecedented accuracy in monitoring water scarcity and offering new powerful instruments for precision agriculture and resource management.

A study carried out in Argentina (⁸) provides another concrete example of the effectiveness of satellite remote sensing through PRISMA. By using such technology, it is, indeed, possible to estimate the concentration of total suspended solids, the depth of the Secchi disk – to measure the transparency of water – and, as seen above, the levels of chlorophyll. The collection of such biophysical parameters makes it possible to calculate the level of eutrophication of the waters. Eutrophication is a phenomenon that is usually observable in water basins where the discharge of wastewater is common, i.e. water deriving from industrial processes or from cultivated land which are polluted with phosphorus and nitrogen, i.e. substances that generally come from detergents and chemical fertilizers and which, once deposited on the river- or sea-beds, multiply by providing nutrients to the algae. Reproducing excessively, such algae consume the oxygen in the water, thus threatening the aquatic ecosystem and compromising the water quality.

⁸ V. Gauto, A. Ferral, M. Bonansea, A. Farías, M. Scavuzzo, O. Cardoz, A. German, C. Giardino, First results of PRISMA satellite data applied to water quality monitoring in Argentina, available at https://ieeexplore.ieee.org/document/9939810.



And a further example of the potential effective use of PRISMA to monitor the delicate terrestrial ecosystem by recognizing water and soil conditions, as well as the chemical substances contained there, is provided by an analysis carried out in relation to Lebanon ⁽⁹⁾.

3. Space activities in the Middle-East: the case of Lebanon and the potential use of PRISMA

The Middle-East is a geopolitical region composed of states showing several differences at different levels. Leaving aside Iran and Israel – that are *"the only regional powers capable of constructing and launching satellites from their own territories"* ⁽¹⁰⁾ and, thus, cannot be considered as emerging space nations, the Middle-Eastern countries, and especially the Gulf ones, have found in the space sector an important tool for economic diversification and growth, so that space technologies have now consolidated themselves not only as priorities in most of their respective development plans, but also as highly strategic and innovation-driven sectors:

- United Arab Emirates (UAE) established a national Space Agency in 2014 and in 2020 became the fifth country in the world to successfully launch a probe to Mars, whereas in 2022 they launched on a path to the moon their (UAE-built) Rashid Rover, also developing a space policy and a national space strategy in an attempt at emerging as leaders in the region; in addition, thanks to UAE-based satellite company Yahsat, they currently provide services in more than 150 countries ⁽¹¹⁾;
- Saudi Arabia that has a national Space Agency, too, and in 2020 announced a US\$2.1 billion investment into its space program – in 2022 renamed the Communications and Information Technology Commission (CITC) as "Communications, Space and Technology Commission" (CSTC) and established the Supreme Space Council, headed by the Crown Prince and Prime Minister;
- Kuwait launched its first satellite ⁽¹²⁾ in January 2023, with a second one already under construction;
- Oman has announced the intention to build a spaceport;
- Egypt has established the Egyptian Space Agency for the development of space and satellite technologies in the Country;
- in 2014, Bahrain established its National Space Science Agency, that at present is drafting a national space law;
- Turkey is pursuing an ambitious space plan that includes contact with the moon in 2023 to celebrate the 100th anniversary of the Republic of Turkey, as well as a second landing on the Moon, in 2028; and last but not least it announced a \$1 billion investment in both its space program and the construction of locally produced hybrid rockets expected to be launched in 2023 with a shuttle for carrying out scientific research ⁽¹³⁾;
- in Jordan a scientific space committee is "putting together a plan to advance diplomacy and policy in relation to space initiatives" ⁽¹⁴⁾;
- and finally, as one of the first Arab countries to send a cosmonaut into space with the Soviet space programme, Syria, too, has a space history: in 2014 the Assad regime announced the creation of the Syrian Space Agency, though no activities have been officialised since then ⁽¹⁵⁾.

⁹ https://iafastro.directory/iac/paper/id/78169/abstract-pdf/IAC-23,E4,3,4,x78169.brief.pdf?2023-05-12.10:53:53

¹⁰ https://www.newarab.com/analysis/there-space-race-middle-east.

 $^{11\} https://www.jdsupra.com/legalnews/ready-for-takeoff-a-look-at-the-space-4180029/.$

¹² Middle East Economy, Kuwati launches first satellite, 5 January 2023.

¹³ https://www.newarab.com/analysis/there-space-race-middle-east.

 $^{14\} https://www.nationaldefensemagazine.org/articles/2020/2/3/middle-east-allies-look-to-expand-space-capabilities.$

¹⁵ https://spacewatch.global/2018/12/syria-seeks-to-build-satellite-establish-a-space-programme/.



As to Lebanon, the use of space technologies definitely represents a powerful tool to deal with its numerous social, economic and environmental fragilities, water among them.

Indeed, thirty years after the end of the civil war, water security continues to be a major concern for Lebanon. Its coasts, lakes and rivers are dangerously polluted with sewage, often visible as grey spots in satellite images ⁽¹⁶⁾. Years of mismanagement resulting in an inadequate and obsolete infrastructural system, in conjunction with climate change, have caused a crisis in the public water service, that is unable to meet the water needs of the Lebanese population despite the abundant resources of water available in the country: the Food and Agriculture Organization (FAO) estimates that Lebanon can count on a total of 4.5 billion cubic meters of renewable freshwater per year ⁽¹⁷⁾.

In addition, the disruption of the national water network has repercussions on the Lebanese population in economic and environmental terms. According to UNICEF, the average cost of 1,000 litres of water transported by truck reached 145,000 Lebanese pounds (LBP) in April 2022, an almost six-fold increase compared to 2019. Furthermore, the rising prices and the series of extreme climate phenomena such as heat waves and prolonged periods of drought have gradually eroded the per-capita water availability of the Lebanese population, that often falls below 35 litres per day – which is the minimum acceptable quantity ⁽¹⁸⁾.

So, today, being aware of the potential benefits generated by space activities, and in the wake of the exponential growth of the space sector, especially in the Middle-Eastern region, Lebanon, too, is renewing its space ambitions. Ambitions that are deeply rooted in the years of the dawn of the space race.

Indeed, in 1960, a group of Haigazian College students, led by Prof. Manoug Manougian, founded the Haigazian College Rocket Society (HCRS), laying the foundations for the Lebanese space program. In April 1961, HCRS launched a single-stage solid-propellant rocket that reached an altitude of about one kilometer. A series of successful events followed, which convinced the then President Fouad Chehab to publicly finance the HCRS experiments. On May 25 1962, HCRS-7 Cedarm was launched with the support of the national Army, reaching an altitude of 11.5 kilometers, soon followed, in the summer of 1962, by two more rockets - Cedar IIB and Cedar IIC - that reached an altitude of 20 kilometers. That series of successful launches attracted new members and investors, who created the Lebanese Rocket Society (LRS).

But the most amazing achievement of the Lebanese Rocket Society was recorded in 1963, when the Cedar IV rocket reached an altitude of 140 kilometers, almost in low Earth orbit ⁽¹⁹⁾. A few years later, on February 23, 1967, Lebanon was the first Arab country in the Middle-East to sign the whole *corpus juris spatialis*: the Outer Space Treaty (OST), and, later, the Agreement on the Rescue and Recovery of Astronauts and Space Objects, the Convention on International Liability for Damage caused by Space Objects, the Convention on the Registration of Objects Launched into Space and the Agreement on the Activities of States on the Moon.

Unfortunately, however, the civil war broke out in 1975, tragically changing the fate of the Lebanese space program, and *de facto* interrupting it.

But, in 1989, thanks to the Ta'if Accords, the end of the war was formalised, and Lebanon could slowly resume its space activities.

¹⁶ Centre for Strategic & International Studies, Sustainable States. Environment, Governance and the Future of the Middle East, May 2021.

¹⁷ FAO – AQUASTAT. See https://storage.googleapis.com/fao-aquastat.appspot.com/countries_regions/ fact sheets/water_ resources/en/LBN-WRS. pdf.

¹⁸ UNICEF, Libano, il sistema idrico è ancora fragile. A rischio la salute di milioni di persone, 22 July 2022.

¹⁹ Hooper, R., *Lebanon's forgotten space programme, BBC, 14 November 2013.*



In 1995, the National Center for Remote Sensing (CRS) was established, that today - along with three more thematic Centers dedicated to geophysics, atomic energy and marine sciences respectively - is governed by the National Council for Scientific Research of Lebanon (CNRS - L)⁽²⁰⁾, which reports directly to the President of the Council of Ministers.

More recently, Lebanon's commitment in space has increased, particularly in an effort to develop upstream capabilities through the construction and launch of its first nano-satellite. Indeed, in 2019, with funding from the European Union and the British Crown Agents agency ⁽²¹⁾, the *"Cubesat Technology: Towards Developing the First Lebanese Nanosatellite"* project was launched, which involves about 70 students and researchers allowing the installation of a ground segment for processing satellite data. Furthermore, the project led to the establishment of a National Space Committee – made up of university institution representatives, CNRS-L and CRS members, as well as private investors – tasked with designing a roadmap for the development of a national space programme.

However, the Lebanese endemic political instability is still hindering the achievement of a coherent and far-sighted vision at governmental level regarding the development of national space activities, which remain a prerogative of academic institutions and research centres. Furthermore, the absence of a specialized industrial sector discourages political interest in the development of an aerospace infrastructure, which remains underdeveloped, and, as a consequence, not profitable.

International partnerships, therefore, remain the backbone of the Lebanese space program. As seen above, the ambitious project for the creation of a national nanosatellite is the result of a collaboration with the European Union and Crown Agents, while, thanks to the Center for Remote Sensing, a series of bilateral collaborations with European countries, such as Italy ⁽²²⁾ and France, were signed.

In such a context, a specific space strategy of direct intervention could be defined, that might benefit the entire national (and international) community.

In particular, in this phase of local crisis, tools and strategies aimed at mitigating some of the main criticalities afflicting Lebanon could be identified, especially, for example, regarding water: as explained above, PRISMA could ensure better management of national water resources by monitoring aquatic ecosystems and water basins to control their state of health and level of pollution.

So, capitalising on the substantial diplomatic legacy shared by Rome and Beirut, the Lebanese Center for Remote Sensing could improve its expertise in the field of earth observation thanks, for instance, to the PRISMA satellite, in the context of a wider cooperation which, adding up to ENI's ⁽²³⁾ (originally *"Ente Nazionale Idrocarburi"*) activities in Lebanese offshore waters, could also include the domain of natural resources, be they hydrocarbon or rare earths ⁽²⁴⁾.

In conclusion, PRISMA data would allow the Lebanese authorities to take appropriate action, where necessary, to address and hopefully stop the environmental degradation process affecting Lebanese waters, alleviating the stress suffered by the population and allowing Lebanon to achieve substantial progress in restoring proper balance between society and the environment, consistently with both the Sustainable Developments Goals of the United Nations 2030 Agenda and with the hopes of the international community as a whole.

²⁰ The CNRS Overview. See http://www.cnrs.edu.lb/english/about/the-cnrs-overview.

²¹ PricewaterhouseCoopers International Limited, *The role of emerging space nations in supporting sustainable development and economic growth*, 2020. See https://www.pwc.fr/en/industrie/secteur-spatial/pwc-space-team-public-reports-and-articles/emerging-space-nation.html

²² National Council for Scientific Research, Regional Research Programmes CNR/CNRS-L.

²³ https://www.eni.com/en-IT/eni-worldwide/middle-east/lebanon.html.

²⁴ Godman Capital, Terre Rare. See https://www.godman-capital.com/terre-rare#:~:text=Terre%20Rare%20Ltd%20%C3%A8%20una,soprattutto%20 di%20%22Terre%20Rare%22.



Miscellaneous Material of Interest

Report on the Seventh Shanghai International Air Law Forum Held at the Shanghai International Dispute Resolution Centre (Shanghai, China) on 4 March 2023 *by Ningze Xie*

Memorandum of Understanding Between the European Space Policy Institute and the Department of Legal Studies at the University of Bologna by Anna Masutti e Sara Dalledonne



Report on the Seventh Shanghai International Air Law Forum Held at the Shanghai International Dispute Resolution Centre (Shanghai, China) on 4 March 2023 by Ningze Xie*

Abstract

This report provides an overview of the Seventh Shanghai International Air Law Forum held in Shanghai, China, on 4 March 2023, which brought together different groups of scholars, experts, policymakers, regulators and industry stakeholders to discuss the growing challenges within the aviation sector. The conference responded to the current legal challenges that confront and affect civil aviation industry both in China and abroad and emphasized an international perspective on the legal issues under discussion. This report encompasses the discussions, presentations from the conference, highlighting the development and prospects in general aviation industry, as well as the advice for promoting the civil airport constructions in China. Additionally, it addresses the recent development of the aviation environmental regulation, passenger rights and arbitration of aviation disputes from an international perspective.

1. Introduction

The Shanghai International Air Law Fora are a series of conferences organised by the East China University of Political Science and Law (ECUPL), the Shanghai International Arbitration Centre (SHIAC) and the Air Law Association of the Shanghai Law Society, with the International Institute of Air and Space Law (IIASL) of Leiden University being a long-time partner. The seventh edition of the Forum was held on 4 March 2023 at the Shanghai International Dispute Resolution Centre, which was the first time that the forum of this series had been organised physically in the post-COVID global recovery.

The Forum was hosted by the ECUPL, SHIAC and Shanghai Law Society, and was co-organised by the ECUPL School of International Law, the Air Law Association of the Shanghai Law Society, the Arbitration Law Association of the Shanghai Law Society, the Shanghai General Aviation Association and the Shanghai International Aviation Court of Arbitration (SIACA) under SHIAC. The event was also supported by the Shanghai Hongqiao Linkong Business Park (Hongqiao Airport Economic Zone) and the International Cooperation and Service Centre (ICSCC) of the Civil Aviation Administration of China (CAAC). More than 70 distinguished guests from the aviation industry, academic community and legal profession attended on-site while online live streaming attracted more than 7,000 participants.

Welcoming addresses were moderated by Prof. Dr Qing YE (University President of ECUPL). His warm greetings were followed by a welcome note given by Dr Junxiu GUO (Chairman of the Air Law Association of the Shanghai Law Society and General Counsel of China Eastern Air Holding Co.), Ms Weijun WANG (Secretary-General of SHIAC), Mr Shaojie LIU (Chairman of the Legal Commission of China Civil Airports Association), Ms Qingfen MENG (Chairman of ICSCC of CAAC) and Ms Ying ZHOU (Deputy Secretary-General of Shanghai General Aviation Association). After that, three-panel sessions were identified as follows:

- Panel 1 A new era: Safeguard the development of the general aviation industry via law;
- Panel 2 A new chapter: Thoughts on law-based construction of civil aviation airport;
- **Panel 3** A new outlook: Recent development on aviation environmental regulation, passenger rights and aviation arbitration.

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2. A New Era: Safeguard the Development of the General Aviation Industry via Law

Ms Ying ZHOU (Deputy Secretary-General of Shanghai General Aviation Association) commenced the first panel 'A new era: Safeguard the development of general aviation industry via law'. General aviation, known as the fourth transportation revolution, is the ladder to the aviation era. Electric vertical takeoff and landing (eVTOL) aircraft will lead a new round of industrial transformation from the generation of cars to the generation of aircraft. It is expected to improve the general aviation transport network with relevant laws and regulations, and the issues concerning the regulation of general aviation, are calling for legal solutions and responses. In this session, representatives from enterprises, regulatory departments, industry associations as well as the legal profession jointly discussed the opportunities and challenges confronted by the general aviation industry.

Mr Wenjun DONG (Advanced Cockpit Research and Development Manager of Shanghai Volant Aerotech Co. Ltd.) introduced the four main tasks of the civil aviation cockpit, namely flight, navigation, communication and system management. He explained that traditionally, people are the ultimate decision-makers in cockpits of the Boeing system while machines are the safety guardians in cockpits of the Airbus system, and highlighted that the accessibility and the human-computer interaction technology would pioneer a new era. Furthermore, he explored the design of the cockpits of eVTOLs, which is an important solution to ground traffic congestion, a game-changer for commuters and an effective means for emission reduction. He also noted that improvement in the regulation of eVTOLs is still being undertaken to address the legal challenges of the dynamic development of eVTOLs.

Ms Zhihui WU (Deputy Director of General Aviation Division of the East China Regional Administration of CAAC) provided an overview of the development of general aviation in China and raised concerns about enhancing the laws and regulations governing general aviation. She further elaborated on three levels of existing authority to regulate general aviation in China. The first level includes laws issued by the Standing Committee of the National People's Congress (NPC), such as the Civil Aviation Law of the People's Republic of China, the Work Safety Law of the People's Republic of China and the Law of the People's Republic of China on the Protection of Consumer Rights and Interests. The second level includes administrative regulations issued by the State Council of China, such as the Provisional Regulations of the State Council on the Administration of General Aviation. Additionally, the Provisions on the Administration of Business Licensing for General Aviation issued by the Ministry of Transport of China is included in the third level as the departmental regulations. She also noted the importance of an eVTOL regulatory framework and introduced the special conditions for eVTOLs employed by different jurisdictions, which include the European Union Aviation Safety Agency (EASA), the United States Federal Aviation Administration (FAA) and CAAC.

Mr Zhihong LI (Director of the Air Law Association of the Shanghai Law Society, Partner of RRDS Law Office) gave a fascinating introduction from a lawyer's perspective about the characteristics of general aviation in China. General Aviation has developed to a certain extent but was small in scale, large in number and commercial in operation. He concluded by addressing that the general aviation legal framework is mainly concerned with documents issued by CAAC and thus is not entitled to establish administrative penalties. Active approaches need to be taken to strengthen and standardise general aviation by establishing and enforcing measures through legal systems.

Prof. Dr Dan YU (Associate Professor of ECUPL) clarified that there are few laws in China governing unmanned aircraft. Standards and documents issued by enterprises, industry associations and research institutions have yielded fruitful results, providing important references for law-making and policy implementation of unmanned aircraft systems (UAS). She concluded that it is imperative to learn from the existing standards and regulations to lay the foundations for the law of unmanned aircraft.



3. A New Chapter: Thoughts on Law-Based Construction of Civil Aviation Airport

The conference continued with the second panel on 'A new chapter: Thoughts on law-based construction of civil aviation airport'. The panel was introduced by Ms Kunxia GAO (Deputy General Manager of the Legal Affairs Department of Capital Airports Holdings Co., Ltd.). A modern comprehensive airport system is crucial for boosting China's strength in civil aviation. The Shanghai Municipal Government's plan has outlined major targets for the construction of the Shanghai International Transportation Centre in the next 14th Five-Year Plan period, which specifies the goal of building a worldclass aviation hub. Representatives of comprehensive hub airports and cargo-focused hub airports provided suggestions on the construction of China's airport system.

Mr Junwu YIN (Director of Ezhou Airport Economic Zone Management Committee) provided valuable insight into how the Ezhou Airport Economic Zone and Ezhou Huahu Airport became a success. Located in Hubei Province, the Ezhou Airport Economic Zone is the economic and geographical centre with a professional cargo airport and an efficient and smooth logistics system. He suggested that China should ramp up regulatory measures to better govern and protect civil aviation. In the future, beefing up the civil aviation legal framework and cultivating a talent pool of aviation law should be highlighted.

Mr Xiangdong CHEN (Manager of the Legal and Audit Department of Shanghai Airport Co. Ltd.) outlined the amendment to the Regulation on the Administration of Shanghai Civil Airports. The optimisation of the management system of Shanghai Airport has led to the emergence of new management bodies, namely the Shanghai Airport Management Commission and Management Office. The two entities have contributed to epidemic prevention and control work, and filled the vacancy of management body. To improve efficiency, he recommended that the duties of management bodies shall be limited to airport-related management issues – which can only be coordinated at the municipal government level – and the approval items originally involved in the Regulation on the Administration of Shanghai Civil Airports.

Mr Guangguang ZHU (Deputy Director of the Legal and Board Affairs Department of Guangzhou Baiyun International Airport Co., Ltd.) provided an overview of Baiyun Airport's scale of business from its passenger and freight volume, economic benefits and regional economic growth. He pointed out that Baiyun Airport aims to be a competitive hub airport by 2025. Further, he gave a captivating account of the law-based governance of enterprises. He suggested that by using a sharing platform to build an efficient legal management system, Baiyun Airport aims to establish a legal management model in line with a world-leading aviation hub.

Dr Jingsong ZHAO (Director of the International Air Law Research Department of the International Cooperation and Service Centre of CAAC) gave a comprehensive insight into the management mode of airport ground service in The US and the EU. US airlines are entitled to choose ground service providers. The airport management authority does not carry out ground service and only charges rent, operating costs and franchise fees. With regards to the EU and the UK, Directive 96/67/EC liberalises access to the ground handling market in the EU or European Economic Area, and is implemented in the UK through the Airports (Ground Handling) Regulations of 1997. The main effect of the directive and the regulation is to require Member States to allow access for third-party ground handlers to the ground handling market at airports.

Ms Ningning LI (Deputy General Manager of Capital Airports Holdings Co. Ltd.) addressed the issue of how to construct safe, green airports from the viewpoint of airport clearance and airport noise pollution. She emphasised the need to clarify the legal status, statutory obligations and specialisation of the airport administration authority. This will help to determine the rights and obligations of relevant entities in preventing aircraft noise pollution and promoting the implementation of regulations. She also pointed out the importance of airport clearance on airworthiness and safe operation.



Updating regulations of civil aviation will help to address the complex issues of rights and obligations faced by airport clearance management.

4. A New Outlook: Recent Development on Aviation Environmental Regulation, Passenger Rights and Aviation Arbitration

The third panel 'A new outlook: Recent development on aviation environmental regulation, passenger rights and aviation arbitration' was moderated by Prof. Dr Kai XU (Deputy Dean of the ECUPL School of International Law). Despite multiple challenges, civil aviation is expected to maintain a steady recovery in the post-COVID. Both the domestic and international aviation industries are interested in the new development of aviation environment regulation, passenger rights and aviation arbitration. Four panellists from IIASL of Leiden University, Paris-Sacaly University, University of Cologne and The Hague Court of Arbitration for Aviation (The Hague CAA) brought the recent development thereof into the light.

Prof. Dr Steven Truxal (Director of IIASL of Leiden University) focused on the environmental regulation of air transport from an EU perspective. Regarding emissions, he called on taking measures at a national level, regional levels such as the EU, international level and transnational level. He gave valuable insight into the global market-based measure, also known as CORSIA, which is the carbon offsetting and reduction scheme for international aviation in the Chicago Convention Annex 16 Volume IV. The EU Emission Trading System (ETS) has created the world's first international market system for capping emissions and allowing operators to trade the emissions. However, the EU decided to stop promoting ETS in November 2012 to allow more space for CORSIA. ETS is due to resume in 2024 and the EU has another legislative framework, the 2030 climate and energy framework, under which the European Commission proposed to raise the 2030 greenhouse gas emission reduction target to at least 55% compared to 1990. He concluded that the EU is moving towards climate climate-neutral economy and aims to be the first climate-neutral continent.

Prof. Dr Vincent Correia (Professor of Public Law at Paris-Saclay University, Chairman of the Academic Committee of the European Air Law Association) presented the latest development of EU external aviation relations and stated that the EU has identified some key partners to negotiate comprehensive air transport agreements. Within those comprehensive air transport agreements, the EU is going to be beyond the traditional US open skies model. The EU is not only opening the markets, but it is also trying to make sure that the partners are applying the same rules, which is regulatory convergence. He underlined that the recent EU-ASEAN Comprehensive Air Transport Agreement is a unique block-to-block agreement. The EU supports Regionalism while the ASEAN Region has to choose between the US open skies model, or the EU model containing market opening and regulatory elements.

Dr Andrea Trimarchi (Aviation Law Research Assistant at the University of Cologne) focused on the controversial interpretation of 'bodily injury' in Article 17 of the Montreal Convention by the European Court of Justice. The court decided that all sorts of psychological injury, which is not linked to bodily injury, must be compensated. In certain states, claiming for psychological injuries was already possible. Although it is a very remarkable paradigm shift, this interpretation got criticism from the aviation community and went against State practice like the *Floyd* case in the United States, the United Kingdom and Canada. He also underlined the weakness that this interpretation is likely to have an enormous effect and reshape the interpretation of the Montreal Convention on the international level. Some commentators have been talking about the tsunami of judicial claims coming to the EU.

Mr Paul Jebely (Founder and Chairman of The Hague Court of Arbitration for Aviation) noted that the scope of The Hague CAA as recently established is to promote the use of arbitration and mediation to solve contractual dispute resolution throughout the vast global aviation industry. He highlighted that neutrality is fundamental to arbitration. The benefits of arbitration include providing subject matter expertise, discretion, confidentiality, procedural simplicity and flexibility,

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the ability to select arbitrators and limited discovery. The rule-making process is ongoing. The Arbitration Rules of The Hague CAA is not limited to a founding text or treaty. It focuses on flexibility and party autonomy, which allow it to develop and adapt to the needs of the users in the practice. The updated rules of The Hague CAA will be published within the coming weeks.

5. Conclusion

In the closing remarks, Prof. Dr Tao DU (Dean of the ECUPL School of International Law) took the opportunity to express his gratitude to all the speakers and staff, as well as his appreciation for the interesting subjects analysed. Prof. Dr Faqiang YUAN (Vice Chairman and Secretary-General of the Air Law Association of the Shanghai Law Society) took the floor and called on industries, universities and research institutes for collaborative innovation and joint promotion of international aviation law.

In recent years, China has made remarkable progress in a wide range of fields such as the civil aviation industry, civil aviation manufacturing, and international and domestic aviation law research. Themed 'law-based civil aviation driving the Chinese path to modernisation', the seventh edition of the Forum aimed to build a platform for experience and knowledge sharing between academia, industry and government organisations.



Memorandum of Understanding Between the European Space Policy Institute and the Department of Legal Studies at the University of Bologna

by Anna Masutti* Sara Dalledonne**



The European Space Policy Institute (ESPI) has concluded a Memorandum of Understanding (MoU) with the Department of Legal Studies (DSG) at the University of Bologna.

ESPI and DSG have a common interest in promoting the development of space policy and law, including aspects related to regulations and economics and fostering a dynamic and responsible space governance regime at the global, regional, European and national levels.

The parties plan to carry out research on space topics. Among other activities, ESPI will continue to contribute to the "The Aviation & Space Journal" through the publication or republication of ESPI Brief, ESPI Perspectives, ESP reports and ad hoc contributions. In addition, the DSG will invite ESPI staff to provide ad hoc guest lectures on the topic of space law, space policy, space governance and economy.

The parties also intend to collaborate in arranging joint conferences, seminars, roundtables, workshops and other events, identifying topics, presenters and participants and by taking part in independent or joint events of one another.

Finally, the Parties recognise the value of jointly advancing better engagement with the general public, academia and industry, especially those that are linked to but are not fully aware of their linkage to the space sector, and future beneficiaries in different sectors of economy and society. To achieve this, ESPI and DSG will jointly establish a broad academic research network for horizontal engagement of research entities dealing with space and those that are linked to the space sector in some other way across Europe and internationally (also, in synergy with the upcoming ESPI Network of Space Think tank - NEST).

The authors would like to thank Ludwig Moeller, ESPI Director, Professor Michele Caianiello, Director of the Department of Legal Studies at the University of Bologna, as well as Professor Attila Tanzi for their continuous valuable support.

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Events

European Space Policy Institute (ESPI) 17th Autumn Conference *Vienna (Austria), 24-25 October 2023*

European Air Law Association (EALA) 35th Annual Conference Stockholm (Sweden), 9-10 November 2023

International Air Transport Association (IATA) World Legal Symposium (WLS) Vancouver (Canada), 21-23 February 2024



17th ESPI Autumn Conference "European Space Governance in a Transforming World"

Vienna, Austria 24 - 25 October 2023

The 17th ESPI Autumn Conference, "European Space Governance in a Transforming World", will be held on 24-25 October 2023 in an in-person format at the Urania Observatory in Vienna, Austria.

Acknowledging that the global scope and nature of space and non-space activities are currently undergoing profound changes, this year's discussions will focus on "European Space Governance in a Transforming World". With a lineup of renowned speakers and panellists, we aim to facilitate insightful discussions and debates on critical issues facing the global space community. This overarching theme will be explored across four sessions, comprised of three panels and one moderated debate:

- Session 1: Embracing Multipolar Partnerships
- Session 2: Bursting Public-to-Public Bubbles
- The Debate: Comparing & Contrasting European & U.S. Space Ambitions
- Session 4: Leveraging a Multistakeholder Environment

The preliminary programme can be found at the following link: <u>https://www.espi.or.at/17th-espi-autu-</u><u>mn-conference/#conference-overview</u>

Please confirm your attendance through the following link: <u>https://www.espi.or.at/17th-espi-autumn-con-</u> <u>ference/</u>

For any questions or to request more information, please send a note to <u>events@espi.or.at</u> or to Sara Dalledonne at: <u>sara.dalledonne@espi.or.at</u>

The Autumn Conference is supported by the European Space Agency (ESA), the Federal Ministry Republic of Austria Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), and the Austrian Research Promotion Agency (FFG).

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European Air Law Association (EALA) 35th Annual Conference

Stockholm (Sweden) 9th and 10th November 2023



The European Air Law Association (EALA) has announced its 35th Annual Conference that will be held in Stockholm (Sweden) on the 9th and 10th November 2023.

Detailed information about invited speakers and the programme is available <u>HERE</u>.



International Air Transport Association (IATA) World Legal Symposium (WLS)

Vancouver, Canada 21 - 23 February 2024



The IATA World Legal Symposium is the world's premier annual aviation law event, with a reputation for insight, relevance and value among in-house counsel, private practitioners and government lawyers alike. The event is well known for its engaging subject matter, outstanding speakers, lively debate and, of course, some of the best networking opportunities you'll find anywhere in the industry. The IATA World Legal Symposium will be held in Vancouver, Canada, from the 21st to the 23rd of February 2024.

During the event it would be possible to:

- gain valuable insights into latest developments, challenges, trends, and best practices in aviation law
- engage with industry leaders from across the globe who share their unique expertise and engage in lively debates
- connect with in-house counsel, private practitioners, and government lawyers, fostering collaborations and expanding your network

The full program is available HERE

Detailed information about invited speakers and the programme is available <u>HERE</u>.

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